SEARCH REQUEST FORM

Scientific and Technical Information Center

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Art Unit: 17)3 Phone N Mail Box and Bldg/Room Location	Number 30 8 - 2379 Serial Number: 10 086 043	•
If m r than one search is subm	nitted, please prioritize searches in order of need.	_
Include the elected species or structures, k	search topic, and describe as specifically as possible the subject matter to be searched. keywords, synonyms, acronyms, and registry numbers, and combine with the concept or that may have a special meaning. Give examples or relevant citations, authors, etc, if sheet, pertinent claims, and abstract.	
Title of Invention:	Sol had chold	
Inventors (please provide full names): _	Alla de	•
Earliest Priority Filing Date:	1 001	
For Sequence Searches Only Please include	de all pertinent information (parent, child, divisional, or issued patent numbers) along with the	
appropriate serial number.	a second	
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STAFF USE ONLY	Type of Search Vendors and cost where applicable	•
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Date Searcher Picked Up:	Bibliographic Qued Dr. Link	
Date Completed:	Litigation Lexis/Nexis	
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Clerical Prop Time:	Patent Family WWW/Internet	
Online Time:	Other Other (specify)	
PTO-1590 (8-01)		

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FILE 'REGISTRY' ENTERED AT 15:18:30 ON 11 JUL 2003
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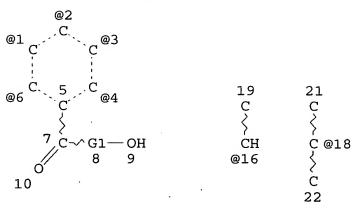
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          17082 S WATARU ?/AU OR MIYAZAKI ?/AU
 L2
           1202 S SHIGENOBU ?/AU OR MARUOKA ?/AU
 L3
L4
              5 S L2 AND L3
                SEL L4 1-5 RN
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L6
              4 S L5 AND PMS/CI
                SEL L6 1 RN
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              1 S E158
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L13
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L14
                SCR 2043
L15
            22 S L1 AND L14
L16
            323 S L1 AND L14 FUL
                DEL TAR243/Q
                SAV L16 TAR243/A
L17
             26 S L16 AND 1/NC
                E (C13H16O2)X/MF
L18
             59 S E3
               E (C13H16O2)N/MF
L19
             13 S E3
L20
             1 S L17 AND L7
L21
             3 S L17 AND (L18 OR L19)
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L24
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               SAV L24 TAR243A/A
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L25
             19 S L24 NOT (L21 OR L7)
L26
             1 S L25 AND 1/NC
L27
             12 S L25 AND 2/NC
L28
         291894 S C H/ELF
L29
              1 S L27 AND L28
L30
              5 S L21 OR L26 OR L29
L31
              4 S L30 NOT L7
L32
              4 POLYLINK L31
L33
              4 S L31 OR L32
     FILE 'HCA' ENTERED AT 15:08:27 ON 11 JUL 2003
L34
              3 S L33
L35
            · 37 S L7
                E COATING MATERIALS/CV
L36
         235398 S E3
                E COATING PROCESS/CV
L37
         104889 S E3
L38
          84211 S ((PHOTO OR LIGHT OR PHOTOLY?)(2A)(RX# OR RXN# OR REACT?
L39
          93925 S ((ULTRAVIOLET? OR ULTRA(W) VIOLET? OR UV# OR SUV OR LUV
         149549 S (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM?
L40
L41
             35 S L35 AND (L36 OR L37 OR L38 OR L39 OR L40)
L42
             19 S L35 AND (L36 OR L37)
             19 S L42 AND (L38 OR L39 OR L40)
L43
L44
           . 19 S L43 NOT L34
L45
             16 S L41 NOT (L34 OR L44)
L46
              2 S L35 NOT (L34 OR L44 OR L45)
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FILE 'REGISTRY' ENTERED AT 15:18:30 ON 11 JUL 2003

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VAR G1=CH2/16/18 VPA 13-4/3/2/1/6 U NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

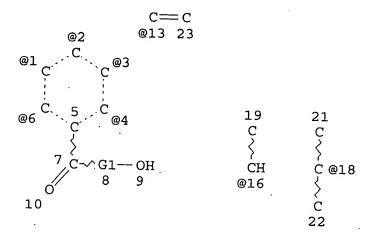
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STEREO ATTRIBUTES: NONE

L14 SCR 2043

L16 323 SEA FILE=REGISTRY SSS FUL L1 AND L14

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VAR G1=CH2/16/18 VPA 13-4/3/2/1/6 U NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS

STEREO ATTRIBUTES: NONE

L24 21 SEA FILE=REGISTRY SUB=L16 SSS FUL L22

100.0% PROCESSED 301 ITERATIONS

21 ANSWERS

SEARCH TIME: 00.00.01

=> file hca

FILE 'HCA' ENTERED AT 15:19:08 ON 11 JUL 2003

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=> d l34 1-3 cbib abs hitstr hitrn

- L34 ANSWER 1 OF 3 HCA COPYRIGHT 2003 ACS
- 138:311599 Method for lithographic printing plate making using IR-sensitive direct-imaging negative-working lithographic plate precursors with UV-sensitive polymer. Okamoto, Yasuo (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003107751 A2 20030409, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-297070 20010927.
- AB The title method includes the steps of: imagewise exposing the lithog. printing plate precursor having an image-forming layer, which contains an IR-absorber, a radical generator, radically polymerizable compds., a binder polymer, and a polymer having an UV-sensitive polymn. initiator, on a hydrophilic support, with IR light; developing the image; and exposing the entire printing plate surface with UV. The printing plate precursor shows high sensitivity and provides the printing plates of high printing durability and little soiling.
- IT 136129-18-5

(UV-sensitive polymer in image-forming layer; IR-sensitive direct-imaging neg.-working lithog. plate precursor)

- RN 136129-18-5 HCA
- CN 1-Butanone, 1-(4-ethenylphenyl)-2-hydroxy-2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 136129-17-4 CMF C13 H16 O2

IT 136129-18-5

(UV-sensitive polymer in image-forming layer; IR-sensitive direct-imaging neg.-working lithog. plate precursor)

- L34 ANSWER 2 OF 3. HCA COPYRIGHT 2003 ACS
- 121:58703 New optimized oligomeric alpha hydroxy acetophenone photoinitiator. Di Battista, Piero; Cattaneo, Massimo; Li Bassi, Giuseppe (Fratelli Lamberti S.p.A., Albizzate, 21041, Italy). RadTech Asia '91, Conf. Proc., 398-403. RadTech Int. North Am.: Northbrook, Ill. (English) 1991. CODEN: 59CNA7.
- AB Hydroxy acetophenones represent a high efficient class of photoinitiators that permits to obtain U.V. cured clear acrylated coatings characterized by low yellowing. When oligomeric hydroxy acetophenones are used, some peculiarities are obtained and practical advantages in the cure process are achieved. The

formulation with diluents allows to overcome a troublesome handling derived from the phys. form of the pure oligomeric products but it may restrict the field of application and sometimes unexpected troubles may result. An active diluent that doesn't show any of the afore mentioned limitations can be successfully used.

IT 156292-11-4

(oligomeric, photochem. initiator contg., for crosslinking)

RN 156292-11-4 HCA

CN Poly[1-[4-(2-hydroxy-2-methyl-1-oxopropyl)phenyl]-1-methyl-1,2-ethanediyl] (9CI) (CA INDEX NAME)

IT 156292-11-4

(oligomeric, photochem. initiator contg., for crosslinking)

L34 ANSWER 3 OF 3 HCA COPYRIGHT 2003 ACS

115:137301 Photoinitiators with functional groups. Part I. Polymer photoinitiators. Klos, R.; Gruber, H.; Greber, G. (Inst. Chem. Technol. Org. Mater., Vienna Univ. Technol., Vienna, 1060, Austria). Journal of Macromolecular Science, Chemistry, A28(9), 925-47 (English) 1991. CODEN: JMCHBD. ISSN: 0022-233X.

AB A series of polymerizable photoinitiators based on hydroxylalkylphenones was synthesized by Grignard reaction of 4-vinylphenylmagnesium chloride with suitable carbonyl compds. Radical homopolymn. and copolymn. of the photoinitiators with various vinyl monomers gave polymeric photoinitiators which were compatible with either hydrophilic or hydrophobic resin systems. The photoinitiator monomers and polymers were characterized by excellent photoinitiating activity comparable with the most efficient known photoinitiators and exhibited high migration stability.

IT 136129-16-3P 136129-18-5P 136129-19-6P

(photoinitiators, prepn. of)

RN 136129-16-3 HCA

CN 1-Propanone, 1-(4-ethenylphenyl)-2-hydroxy-2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-39-2 CMF C12 H14 O2

RN 136129-18-5 HCA

CN 1-Butanone, 1-(4-ethenylphenyl)-2-hydroxy-2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 136129-17-4 CMF C13 H16 O2

RN 136129-19-6 HCA

CN 1-Propanone, 1-(4-ethenylphenyl)-2-hydroxy-2-methyl-, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 101649-39-2 CMF C12 H14 O2

CM 2

CRN 100-42-5 CMF C8 H8 $H_2C \longrightarrow CH - Ph$

IT 136129-16-3P 136129-18-5P 136129-19-6P (photoinitiators, prepn. of)

=> d 144 1-19 cbib abs hitstr hitind

L44 ANSWER 1 OF 19 HCA COPYRIGHT 2003 ACS

137:234143 Transparent **UV curable** coating system.
Colton, Martin; Batson, Robert (USA). U.S. Pat. Appl. Publ. US
2002132871 A1 20020919, 14 pp., Cont.-in-part of U.S. Ser. No.
874,305. (English). CODEN: USXXCO. APPLICATION: US 2002-95041
20020312. PRIORITY: US 2000-709535 20001113; US 2000-709537
20001113; US 2001-874305 20010606.

AB A UV/visible light reactive coating compn. is used for a permanent, hard, durable protective coating to stone, ceramic, glass, metal and hard plastics (no data). The coating material comprises a blend of photoinitiators, UV-curable resin blends, blends of specific acrylate and methacrylate monomers, a wetting agent, UV absorbers and stabilizers, a rheol. modifier, adhesive agents, air-release agents and self leveling agents with misc. additives to impart specific properties.

IT 115055-18-0, Kip 150

(transparent **UV-curable** coating system contg.)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F002-48

ICS C08F002-46; C08J003-28; C08G002-00

NCL 522007000

CC 42-10 (Coatings, Inks, and Related Products)

```
ST
     UV curable acrylate coating durability
IT
     Coating materials
        (UV-curable; transparent UV-
        curable coating system for hard surfaces)
IT
     Coating materials
        (abrasion-resistant; transparent UV-curable
        coating system for hard surfaces)
IT
     Polyesters, uses
        (acrylate-terminated; transparent UV-curable
        coating system contg.)
IT
     Polyethers, uses
        (acrylates; transparent UV-curable coating
        system contq.)
IT
     Coating materials
        (antislip; transparent UV-curable coating
        system for hard surfaces)
IT
     Crosslinking catalysts
        (photochem.; transparent UV-curable coating ...
        system contg.)
IT
     Coating materials
        (photocurable; transparent UV-curable
        coating system for hard surfaces)
IT
     Polyurethanes, uses
        (polyester-, acrylates; transparent UV-curable
        coating system contg.)
IT
     Polyurethanes, uses
        (polyether-, acrylates; transparent UV-curable
        coating system contg.)
IT
     Adhesion promoters
     Leveling agents
     UV stabilizers
        (transparent UV-curable coating system
        contg.)
IT
     Ceramics
        (transparent UV-curable coating system for
        hard surfaces)
IT
     Glass, miscellaneous
     Plastics, miscellaneous
     Stone, artificial
        (transparent UV-curable coating system for
        hard surfaces)
IT
     115055-18-0, Kip 150
        (transparent UV-curable coating system
        contg.)
     947-19-3, IRGACURE 184
                              75980-60-8, 2,4,6-Trimethylbenzoyldiphenyl
IT
                     133518-36-2, Esacure TZT 162881-26-7, IRGACURE
     phosphine oxide
     819
        (transparent UV-curable coating system
        contg.)
                     HCA COPYRIGHT 2003 ACS
     ANSWER 2 OF 19
```

137:218058 Hard coating films with excellent adhesion and reduced gas

generation during heating. Miyazaki, Wataru; Maruoka, Shigenobu (Lintec Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002256092 A2 20020911, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-60960 20010305.

The films, useful for display protection films, have hard coating layers formed by applying photocurable compns. contg. oligomeric photoinitiators on substrates and photocuring them. Thus, a 100:5 Kayarad DPHA (dipentaerythritol hexaacrylate)-Esacure KIP 150 [2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone oligomer] mixt. was applied to a PET film and UV-irradiated to give a film showing pencil hardness 2H and good adhesion and no gas genration after heating at 150.degree. for 1 h.

IT 115055-18-0, Esacure KIP 150

(hard coating films manufd. by using oligomeric photoinitiators with good adhesion and reduced gas generation during heating)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4.-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08J007-04

ICS C08J007-04; C08F002-50; C08F020-20; C09D004-00; C09D005-00; C09D125-18; C08L101-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

ST hard coating film gas generation redn; oligomer initiator photocuring film display protection; oligomeric photoinitiator hard coating film adhesion

IT Coating materials

(photocurable; hard coating films manufd. by using oligomeric photoinitiators with good adhesion and reduced gas generation during heating)

IT Polymerization catalysts

(photopolymn.; hard coating films manufd. by using oligomeric photoinitiators with good adhesion and reduced gas generation during heating)

IT 115055-18-0, Esacure KIP 150

(hard coating films manufd. by using oligomeric photoinitiators with good adhesion and reduced gas generation during heating)

L44 ANSWER 3 OF 19 HCA COPYRIGHT 2003 ACS

137:171159 UV curable substantially solid deck sealant and coating compositions. Sokol, Andrew A. (USA). U.S. Pat. Appl. Publ. US 2002110643 A1 20020815, 10 pp. (English). CODEN: USXXCO. APPLICATION: US 2001-908037 20010718., PRIORITY: US

2000-PV219215 20000718.

The compns., for use with wood and, in particular, weathered wood surfaces and other porous surfaces, are prepd. from a mixt. of UV curable acrylates, and a photoinitiator blend, further including fillers, fungicides, insect repellents, animal repellents, UV light absorbers, pigments, dyes, and the like. One example of the compns. comprise: aliph. urethane acrylate 8.34, isobornyl acrylate, propoxylated trimethylolpropane triacrylate 76.2, fumed silica 10.0, Disperbyk 163 (a dispersant) 5.0, a fungicide 5.0, Tinuvin 292 (a UV blocker) 0.93, photoinitiator blend of (Irgacure 1800) 0.09, (Irgacure 907) 0.002, (Esacure KTO 46) 0.09 parts.

substantially solid deck sealant and coating compns.)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM B05D003-02

NCL 427384000

CC 42-11 (Coatings, Inks, and Related Products)

urethane acrylate photoinitiator wood solid deck coating compn; propoxylated trimethylolpropane triacrylate UV curable solid deck sealant compn

IT Fungicides

```
boow
     Wood boards
        (UV curable substantially solid deck sealant
        and coating compns.)
IT
     Coating materials
        (UV-curable; UV curable
        substantially solid deck sealant and coating compns.)
     Polyesters, uses
IT
        (acrylate-terminated, polymer with (meth) acrylates; UV
        curable substantially solid deck sealant and coating
        compns.)
IT
     Epoxy resins, uses
        (acrylates, polymer with (meth)acrylates; UV
        curable substantially solid deck sealant and coating
        compns.)
IT
     Polyurethanes; uses
        (acrylates, polymer with isobornyl acrylate and propoxylated
        trimethylolpropane triacrylate; UV curable
        substantially solid deck sealant and coating compns.)
IT
     Sealing compositions
        (photocurable; UV curable
        substantially solid deck sealant and coating compns.)
IT
     Polymerization catalysts
        (photopolymn.; UV curable
        substantially solid deck sealant and coating compns.)
IT
    Acrylic polymers, uses
        (polyether-, polymer with (meth)acrylates; UV
        curable substantially solid deck sealant and coating
        compns.)
     Coating materials
IT
     Sealing compositions
        (weather-resistant; UV curable substantially
        solid deck sealant and coating compns.)
IT
     41556-26-7, Tinuvin 292
        (UV blocker; UV curable
        substantially solid deck sealant and coating compns.)
     5888-33-5DP, Isobornyl acrylate, polymer with aliph. urethane
IT
     acrylate and propoxylated trimethylolpropane triacrylate
     53879-54-2DP, Propoxylated trimethylolpropane triacrylate, polymer
    with aliph. urethane acrylate and isobornyl acrylate
        (UV curable substantially solid deck sealant
        and coating compns.)
IT
     7631-86-9, Fumed silica, uses
        (colloidal, filler; UV curable substantially
        solid deck sealant and coating compns.)
IT
    115452-84-1, Disperbyk 163
        (dispersant; UV curable substantially solid
        deck sealant and coating compns.)
IT
    115055-18-0, 2-Hydroxy-2-methyl-1-[4-
     (methylvinyl)phenyl]propanone homopolymer
                                                  446045-07-4
        (oligomeric, photoinitiator; UV curable
        substantially solid deck sealant and coating compns.)
```

- IT 98-86-2, Acetophenone, uses 119-61-9, Benzophenone, uses 134-84-9, 4-Methylbenzophenone 947-19-3, 1-(Hydroxycyclohexyl) phenyl ketone 954-16-5, 2,4,6-Trimethylbenzophenone 1-Phenyl-2-hydroxy-2-methyl-1-propanone 13840-40-9, Phosphine 24650-42-8, .alpha.,.alpha.-Dimethoxy-.alpha.phenylacetophenone 162881-26-7 184649-96-5, Irgacure 1800 211431-21-9, Esacure KTO 46 446045-08-5 446045-09-6 (photoinitiator; **UV curable** substantially solid deck sealant and coating compns.)
- L44 ANSWER 4 OF 19 HCA COPYRIGHT 2003 ACS

 136:119284 Radiation-curable compositions and cured articles. Smetana, David A.; Koleske, Joseph V. (Suncolor Corporation, USA). PCT Int. Appl. WO 2002006371 A2 20020124, 76 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US41273 20010705. PRIORITY: US 2000-616201 20000713.
- AB A radiation-curable compn. in a liq. or solid form comprises at least one solid, non-cryst. radiationtransmissible material, dispersed in at least one cationic-curable or free-radical curable compn. or mixt. thereof. The solid, non-cryst. radiation-transmissible materials comprise glasses and other suitable materials that transmit (i.e., are transparent to) at least about 40 of radiation having a wavelength from about 180 to about 600 nm. The cationic-curable compns. comprise at least one cycloaliph. epoxide, at least one polyol, and at least one cation-generating photoinitiator. The free-radical curable compns. comprise at least one ethylenically unsatd. compd. and at least one free-radical-generating photoinitiator unless electron beam curing is used, in which case the amt. of photoinitiator can be reduced or even eliminated. The solid forms of the radiationcurable compns. of the invention are useful as powder coatings for coating decorative and functional objects and that would be cured by a thermal heating flow process followed by radiation exposure. The cured compns. of the invention are useful as coatings and inks for metal, paper, plastics, glass, ceramics, and wood, as adhesives, as sealants, and as composite materials and The cured compns. of this invention also are useful other articles. in biomedical and dental applications, including prosthetic devices such as dentures; coatings, fillings, and caps for teeth; and the

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RN
     115055-18-0 HCA
     1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,
CN
     homopolymer (9CI) (CA INDEX NAME)
     CM
     CRN
          101649-40-5
     CMF
          C13 H16 O2
IC
     ICM C08G059-00
     37-6 (Plastics Manufacture and Processing)
CC
     Section cross-reference(s): 42, 63
ST
     radiation curable compn; solid noncryst
     radiation transmissible material
IT
     Glass microspheres
        (borosilicate; radiation-curable compns. and
        cured articles)
IT
     Polymerization catalysts
        (cationic, photochem.; radiation-curable
        compns. and cured articles)
IT
     Borosilicate glasses
        (microspheres; radiation-curable compns. and
        cured articles)
IT
     Polyurethanes, uses
        (polyester-, acrylate-terminated; radiation-
        curable compns. and cured articles)
IT
     Borosilicates
        (potash; radiation-curable compns. and cured
        articles)
IT
     Coating materials
        (radiation-curable compns. and cured
        articles)
IT
     Epoxy resins, uses
        (radiation-curable compns. and cured
        articles)
IT
     Borosilicates
        (radiation-curable compns. and cured
        articles)
IT
     Borosilicates
        (soda; radiation-curable compns. and cured
```

articles)

- IT 15625-89-5, Trimethylolpropane triacrylate (SR 351HP; radiation-curable compns. and cured articles)

- 96-08-2, Limonene diepoxide 2386-87-0, 3,4-Epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate 3130-19-6, Bis(3,4-epoxycyclohexylmethyl)adipate 53814-24-7, Bisphenol A-epichlorohydrin copolymer diacrylate 54735-63-6, TONE 0301 (radiation-curable compns. and cured articles)
- L44 ANSWER 5 OF 19 HCA COPYRIGHT 2003 ACS
 135:305343 UV-curable resin compositions for back
 coats and manufacture of shadow masks therewith. Tachizawa,
 Masahiro; Ando, Masayuki (Dainippon Printing Co., Ltd., Japan).
 Jpn. Kokai Tokkyo Koho JP 2001279131 A2 20011010, 14 pp.
- (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-93648 20000330.

 Title compns. contain .gtoreq.1 (meth)acryloyl group-contg. compds. and radical developing side chain-contg. polymeric initiators with wt.-av. mol. wt. of 500-5,000. A compn. contg. Viscoat 2100, CBX 1 [(2,2,2-triacryloyloxymethyl)ethyl monophthalate], and Esacure KIP 150 was UV-cured to form a film showing 90.degree. etching pptn. of <0.5 g and 90.degree. 20% NaOH-contg. aq. soln. removability of<1 min.
- IT 115055-18-0, Esacure KIP 150 (polymeric initiator-contg. acrylic back coats with easy alk. soln. removability for shadow masks)
- RN 115055-18-0 HCA CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C09D004-02

ICS C08F002-50; G03F007-029; H01J009-14

CC 42-13 (Coatings, Inks, and Related Products) Section cross-reference(s): 74

ST UV curable polymeric initiator acrylic back coating shadow mask

IT Coating materials

(UV-curable; polymeric

initiator-contg. acrylic back coats with easy alk. soln. removability for shadow masks)

TT 71878-19-8 115055-18-0, Esacure KIP 150 (polymeric initiator-contg. acrylic back coats with easy alk. soln. removability for shadow masks)

L44 ANSWER 6 OF 19 HCA COPYRIGHT 2003 ACS 135:196944 VOC-free radiation-curable vinyl

dioxolane end-capped resin compositions. Kovar, Robert F.; Orbey, Nese; Wentworth, Stanley (Foster Miller, Inc., USA). PCT Int. Appl. WO 2001060870 Al 20010823, 66 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US4535 20010212. PRIORITY: US 2000-PV182619 20000215; US 2000-PV220988 20000725.

The present invention provides radiation curable resin compns. that contain no or essentially no volatile org. components (VOCs), and to methods of using these compns. The radiation curable resin compns. find particular use as coating compns. In particular, the radiation curable resin compns. of this invention comprise a vinyl dioxolane end-capped oligomer blended with a photoinitiator.

IT 115055-18-0, 2-Hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone] homopolymer (oligomeric; VOC-free radiation-curable vinyl

dioxolane end-capped resin compns.)

RN 115055-18-0 HCA

```
1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,
CN
     homopolymer (9CI) (CA INDEX NAME)
     CM
           1
     CRN
          101649-40-5
     CMF
          C13 H16 O2
                 OH
    CH2
IC
     ICM C08F002-48
     ICS
          C08L067-00; C08L075-06; C08G063-00
CC
     42-10 (Coatings, Inks, and Related Products)
     vinyl dioxolane endcapped oligomer photoinitiator radiation
ST
     curable coating
     Coating materials
IT
        (radiation-curable; VOC-free
        radiation-curable vinyl dioxolane end-capped
        resin compns.)
IT
     Polyesters, uses
     Polyurethanes, uses
        (vinyldioxolane end-capped; VOC-free radiation-
        curable vinyl dioxolane end-capped resin compns.)
IT
     119-61-9, Benzophenone, uses
                                    947-19-3, 1-Hydroxy cyclohexyl phenyl
     ketone
              954-16-5
                         7473-98-5
                                    13840-40-9, Phosphine oxide
                  42343-24-8, Methylbenzophenone 125051-32-3
     24650-42-8
     125954-07-6, Trimethylbenzoyldiphenylphosphine oxide
                                                             162881-26-7,
     Bis(2,4,6-trimethylbenzoyl)-phenylphosphineoxide
        (VOC-free radiation-curable vinyl dioxolane
        end-capped resin compns.)
IT
     223919-18-4P
                    356068-44-5P
                                   356068-46-7P
        (VOC-free radiation-curable vinyl dioxolane
        end-capped resin compns.)
     356068-48-9P
IT
        (VOC-free radiation-curable vinyl dioxolane
        end-capped resin compns.)
IT
     115055-18-0, 2-Hydroxy-2-methyl-1-[4-(1-
    methylvinyl)phenyl]propanone] homopolymer
        (oligomeric; VOC-free radiation-curable vinyl
        dioxolane end-capped resin compns.)
    ANSWER 7 OF 19 HCA COPYRIGHT 2003 ACS
134:259022 Ultraviolet light curable
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polymer matrix for tight-buffering optical fibers. Zopf,
Richard F.; Thiffault, Brian D. (The Stewart Group, Inc., Can.).
U.S. US 6208790 B1 20010327, 10 pp. (English). CODEN: USXXAM.
APPLICATION: US 1999-239404 19990128.

AB Tight buffered optical fiber coatings comprising an UVcurable coating applied around the circumference of an
optical fiber and cured thereon at rates >100 m/min are described in
which the optical fiber is non-colored and the UVcurable polymer coating is pigmented to color-code
the optical fiber to aid in fiber identification. Optical fibers
provided with the coatings are also described.

IT 115055-18-0, KIP 150

(colored UV-curable coatings for

tight-buffering optical fibers and optical fibers provided with the coatings)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM G02B006-02

NCL 385128000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 42

ST colored **UV curable** coating tight buffering optical fiber

IT Polysiloxanes, uses

(EB 350, UV-curable; colored UV-

curable coatings for tight-buffering optical fibers and
optical fibers provided with the coatings)

IT Coating materials

Optical fibers

(colored **UV-curable** coatings for

tight-buffering optical fibers and optical fibers provided with the coatings)

IT 2082-79-3, Irganox 1076 41484-35-9, Irganox 1035 41556-26-7,

Tinuvin 292 75577-70-7, SR 454 115055-18-0, KIP 150

(colored UV-curable coatings for

tight-buffering optical fibers and optical fibers provided with the coatings)

IT 331449-81-1 331449-82-2

(colored UV-curable coatings for

tight-buffering optical fibers and optical fibers provided with the coatings)

L44 ANSWER 8 OF 19 HCA COPYRIGHT 2003 ACS

134:209324 A highly efficient photoinitiator for water-borne UV
-curable systems. Visconti, M.; Cattaneo, M. (Lamberti
S.p.A., Albizzate, 21041, Italy). Progress in Organic Coatings,
40(1-4), 243-251 (English) 2000. CODEN: POGCAT. ISSN: 0300-9440.
Publisher: Elsevier Science S.A..

AB A ready-to-use oil in water emulsion, Esacure KIP/EM was developed based on oligomeric, poly-functional .alpha.-hydroxyketone photoinitiator Esacure KIP 150. The emulsion is stable and it is easily incorporated into water-borne formulations, e.g., varnish based on acrylated polyester. The components of the emulsion do not adversely affect the performance of the photoinitiator itself. The photoinitiator incorporated into the emulsion has a low volatility, it does not release volatile photodecompn. products, and has a low tendency to migrate from the cured formulations.

IT 115055-18-0, Esacure KIP 150

(oligomeric hydroxyketone photoinitiator performance and stability in water-borne **UV-curable** coating systems)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

CC 42-3 (Coatings, Inks, and Related Products)

ST hydroxyketone multifunctional photoinitiator waterborne UV curable coating; acrylated polyester UV curable varnish hydroxyketone photoinitiator

IT Coating materials

(UV-curable, water-thinned; oligomeric hydroxyketone photoinitiator performance and stability in water-borne UV-curable coating systems)

IT Polyesters, uses

(acrylated; oligomeric hydroxyketone photoinitiator performance and stability in water-borne **UV-curable** coating systems)

IT Polyurethanes, uses

(acrylates; oligomeric hydroxyketone photoinitiator performance and stability in water-borne **UV-curable** coating systems)

IT Emulsions

(oil-in-water; oligomeric hydroxyketone photoinitiator performance and stability in water-borne UV-curable coating systems)

IT Hardness (mechanical)

Particle size distribution

(oligomeric hydroxyketone photoinitiator performance and stability in water-borne UV-curable coating systems)

IT Crosslinking catalysts

(radical, photochem.; oligomeric hydroxyketone photoinitiator performance and stability in water-borne UV-curable coating systems)

IT 214840-87-6, Esacure KIP/EM

(oil-in-water emulsion photoinitiator; oligomeric hydroxyketone photoinitiator performance and stability in water-borne **UV-curable** coating systems)

IT 115055-18-0, Esacure KIP 150

(oligomeric hydroxyketone photoinitiator performance and stability in water-borne UV-curable coating systems)

L44 ANSWER 9 OF 19 HCA COPYRIGHT 2003 ACS

134:164598 Coating composition and its cured material with good properties. Yamaguchi, Kaichi; Yashiro, Takao; Nishiwaki, Isao; Ukaji, Takashi (JSR Co., Ltd., Japan; Nippon Tokushu Coating K. K.). Jpn. Kokai Tokkyo Koho JP 2001049077 A2 20010220, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-228296 19990812.

- The compn. comprises (A) a particle prepd. by the bonding of a polymerizable unsatd. group-contg. org. compd. and an oxide compd. of Si, Al, Zr, Ti, Zn, Ge, In, Ti, Sb, and/or Ce; (B) a radiation polymn. initiator; and (C) a polymerizable unsatd. compd. Thus, a compn. was made from a crosslinked particle in MEK dispersion which contained a reaction product of mercaptopropyltrimethoxysilane, IPDI and pentaerythritol triacrylate (I) and MEK-ST; dipentaerythritol hexaacrylate; I; and 2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanol oligomer radiation initiator.
- IT 115055-18-0, 2-Hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone homopolymer

(KIP 150, radiation initiator; coating compn. and its cured material with good properties)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08L057-00

CC 42-10 (Coatings, Inks, and Related Products)

ST IPDI acrylate crosslinked silane dispersion coating; acrylic polymer **photocurable** coating; radiation initiator methylvinyl phenyl propanol oligomer

IT Coating materials

(photocurable; coating compn. and its cured material with good properties)

IT Polymerization catalysts

(radiation initiators; coating compn. and its cured material with good properties)

IT Coating materials

IT

(radiation-curable; coating compn. and its cured material with good properties)

115055-18-0, 2-Hydroxy-2-methyl-1-[4-(1-

methylvinyl)phenyl]propanone homopolymer

(KIP 150, radiation initiator; coating compn. and its cured material with good properties)

IT 147076-20-8; Dipentaerythritol hexaacrylate-pentaerythritol triacrylate copolymer

(photocurable; coating compn. and its cured material with good properties)

L44 ANSWER 10 OF 19 HCA COPYRIGHT 2003 ACS

133:209338 Photopolymerization initiators,
photocurable resin compositions, moldings coated with the
compositions, and method for yellowing prevention. Fujita, Makoto
(Sumitomo Chemical Co., Ltd., Japan).. Jpn. Kokai Tokkyo Koho JP
2000248012 A2 20000912, 6 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1999-50314 19990226.

The initiators comprise hydroxy(lower alkyl)phenones and 1,1-di(lower alkoxy)-1,2-diphenylethanes. The compns. are useful for coatings for digital versatile disks, compact disks, etc. A compn. comprising bisphenol A diglycidyl ether diacrylate 10, polyethylene glycol diacrylate 10, neopentyl glycol hydroxypivalic acid diacrylate 70, ethylene oxide-modified phosphoric acid dimethacrylate 0.2, Irgacure 184 10, and Irgacure 651 1.5 parts were applied on a polycarbonate optical disk substrate and cured by UV irradn. to give a coating showing yellowing index <3.0 and no stickiness.

IT 115055-18-0

(oligomeric, photopolymn. initiators; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F002-50

ICS C08F020-10; C08F290-00; C08J007-04; C09D004-00

CC 42-3 (Coatings, Inks, and Related Products) Section cross-reference(s): 35, 38, 67, 74

photopolymn initiator polyacrylate coating yellowing prevention; hydroxycyclohexyl phenyl ketone polyacrylate coated molding; methoxyphenylacetophenone polyacrylate coating compact disk polycarbonate; digital video disk polycarbonate polyacrylate coating; optical disk polyacrylate coating yellowing prevention Polycarbonates, uses

(optical disk substrates; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

IT Coating materials

(photocurable; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks)

IT Optical disks

Yellowing prevention (photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) ITMolded plastics, uses (photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) IT Polymerization catalysts (photopolymn., hydroxyalkylphenones and dialkoxydiphenylethanes; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) IT115055-18-0 (oligomeric, photopolymn. initiators; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) IT 947-19-3, Irgacure 184 (photopolymn. initiator; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) 290832-67-6P IT (photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) 24650-42-8, Irgacure 651 IT7473-98-5 69673-80-9. 1-(4-Dodecylphenyl)-2-hydroxy-2-methylpropan-1-one 69673-85-4, 1-(4-Isopropylphenyl)-2-hydroxy-2-methylpropan-1-one 151169-33-4 (photopolymn. initiators; photopolymn. initiators for photocurable coatings with reduced yellowing for optical disks) ANSWER 11 OF 19 HCA COPYRIGHT 2003 ACS L44133:31852 Radiation-curable hard coating composition and abrasion-, solvent-, and curling-resistant film coated with the composition. Kano, Hirokazu (Nippon Kayaku Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000167999 A2 20000620, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-345727 19981204. AB The film has a radiation-cured coating layer formed from a compn. contg. (A) a radiationcurable polyfunctional (meth)acrylate, (B) a compd. having copolymerizable unsatd. double bond at the terminal and/or a compd. not having the bond, (C) a photopolymn. initiator. compn: contg. Kayarad DPHA (dipentaerythritol hexaacrylate) 40.3, Epikote 828 acrylate 16.1, Kayarad PET 30 (pentaerythritol) triacrylate) 16.1, 50% PhMe soln. of Macromonomer AN 6S 8.1, Esacure KIP 150 [2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propanone oligomer] 4.9 parts was applied on a polyester film and irradiated with a high-pressure Hg lamp to give a coated film with pencil hardness 3H. The film generated almost no gas when heated. IT115055-18-0, Esacure KIP 150 (abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.) RN115055-18-0 HCA

1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,

CN

homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM B32B027-30

ICS C09D004-00

CC 42-7 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

ST UV curable acrylic hard coating; abrasion solvent resistance acrylic hard coating; epoxy acrylate hard coating curling resistance; dipentaerythritol pentaerythritol acrylate copolymer hard coating; photopolymn catalyst hydroxyketone oligomer hard coating

IT Coating materials

(UV-curable; abrasion-, solvent-, and curling-resistant films coated with radiation-

curable compns.)

IT Plastic films

(abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

IT Polycarbonates, uses

Polyesters, uses

(abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

IT Coating materials

(abrasion-resistant; abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

IT Epoxy resins, uses

(acrylic; abrasion-, solvent-, and curling-resistant films coated
with radiation-curable compns.)

IT Polymerization catalysts

(photopolymn., hydroxyketone polymers; abrasion-,
solvent-, and curling-resistant films coated with
radiation-curable compns.)

IT Polysulfones, uses

Polysulfones, uses

(polyether-; abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

IT Polyethers, uses Polyethers, uses

(polysulfone-; abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

IT Coating materials

(solvent-resistant; abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

IT 115055-18-0, Esacure KIP 150

(abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)

- IT 9002-88-4 9003-07-0, Polypropylene 274260-00-3, Epikote 828 acrylate-Kayarad DPHA-Kayarad PET-30-Macromonomer AN 6S copolymer (abrasion-, solvent-, and curling-resistant films coated with radiation-curable compns.)
- L44 ANSWER 12 OF 19 HCA COPYRIGHT 2003 ACS
- 132:201105 Photohardenable resin composition for optical recording disk protective film. Takahashi, Toshihiko; Takase, Hideaki; Ukaji, Takashi (JSR Co., Ltd., Japan; Nippon Tokushu Coating K. K.). Jpn. Kokai Tokkyo Koho JP 2000063450 A2 20000229, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-231493 19980818.

GI

- * STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT *
- The photohardenable resin compn. comprises (A) a (meth)acrylate I (n = 1-6; R1 = H, Me; R2 = single bond, O, S, SO2, divalent org. group; R3-10 = H, halo, C1-6 alkyl, Ph), (B) a (meth)acrylate II (a, b = 1-8; R11 = H, Me; R12 = R2; R15-22 = R3-10; R13,14 = C1-6 alkylene), (C) an org. compd. contg. .gtoreq.1 N and a polymerizable vinyl group, and (D) a photopolymn. initiator. The compn. is made up of (a) 10-60, (B) 5-80, (C) 5-50, and (D) 0.1-15 wt. parts on the basis of 100 wt. parts of (A)-(D).

IT **115055-18-0**, Esacurekip 150

(photopolymn. initiator; photohardenable

resin compn. for optical recording disk protective film)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F290-06

ICS C08F002-50; C08F220-26; G11B007-24; C09D133-14

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 37

ST **photohardenable** resin compn protective film optical recording disk

IT Coating materials

Optical disks

(photohardenable resin compn. for optical recording disk protective film)

IT 259660-54-3P 259660-55-4P 259660-56-5P 259660-57-6P (photohardenable resin compn. for optical recording disk protective film)

IT 947-19-3, Irgacure 184 **115055-18-0**, Esacurekip 150

119313-12-1, Irgacure 369

(photopolymn. initiator; photohardenable resin compn. for optical recording disk protective film)

L44 ANSWER 13 OF 19 HCA COPYRIGHT 2003 ACS

132:36968 Photoinitiator efficiency in waterborne UVcurable coatings. Pietschmann, Norbert (Dep. Raw Mater.
Coatings Varnishes, Inst. Lacke Farben, Germany). European Coatings
Journal (9), 60,62-63,66,68-69 (English) 1999. CODEN: ECJOEF.
ISSN: 0930-3847. Publisher: Vincentz Verlag.

Various photoinitiators were tested in simple clearcoat formulations based on 2 aq. UV-curable resin emulsions (both unsatd. polyester and polyester acrylate) and on 2 polyurethane acrylate dispersions. Pre-drying temp., initiator conc., and incorporation methods were varied and values of pendulum hardness on glass were used to evaluate the curing result. Cryst. 2-hydroxy-2-methyl-1-[4-(2-hydroxyethoxy)phenyl]propan-1-one gave particularly good results at low conc. (below the soly. limit of 2%).

IT 115055-18-0

(oligomeric; photoinitiator efficiency in waterborne UV
-curable coatings)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

CC 42-3 (Coatings, Inks, and Related Products)

ST coating waterborne **UV curable** photoinitiator efficiency; polymer waterborne emulsion dispersion photoinitiator curing; polyester acrylate coating **photocrosslinking** catalyst; polyurethane acrylate coating **photocrosslinking** catalyst

IT Coating materials

(UV-curable, waterborne; photoinitiator

efficiency in waterborne UV-curable coatings)

IT Polyesters, properties

(acrylate-terminated; photoinitiator efficiency in waterborne UV-curable coatings)

IT Polyurethanes, properties

(acrylates; photoinitiator efficiency in waterborne UV-curable coatings)

IT Crosslinking catalysts

(photochem.; photoinitiator efficiency in waterborne UV -curable coatings)

IT Polyesters, properties

(unsatd.; photoinitiator efficiency in waterborne UV-curable coatings)

IT Coating materials

(water-thinned, UV-curable; photoinitiator
efficiency in waterborne UV-curable coatings)

IT 115055-18-0

(oligomeric; photoinitiator efficiency in waterborne UV
-curable coatings)

IT 119-61-9, Benzophenone, uses 134-84-9, 4-Methylbenzophenone 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 954-16-5, 2,4,6-Trimethylbenzophenone 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 106797-53-9

(photoinitiator efficiency in waterborne UV-curable coatings)

L44 ANSWER 14 OF 19 HCA COPYRIGHT 2003 ACS

- 131:116573 Real-time FTIR-ATR spectroscopy to study the kinetics of ultrafast photopolymerization reactions induced by monochromatic UV light. Scherzer, Tom; Decker, Ulrich (Department of Electron Beam Technology, Institute of Surface Modification, Leipzig, D-04318, Germany). Vibrational Spectroscopy, 19(2), 385-398 (English) 1999. CODEN: VISPEK. ISSN: 0924-2031. Publisher: Elsevier Science B.V..
- AB Real-time FTIR-ATR spectroscopy was used to study the kinetics of photopolymn. reactions induced by monochromatic UV light.

 Various photoinitiator systems were tested for their efficiency to start the curing reaction of acrylates on irradn. at 313 or 222 nm. The effect of phys. and chem. factors such as photoinitiator concn., light intensity, temp., monomer functionality and inertization on kinetic parameters like polymn. rate, induction period and final conversion was studied. The contribution of the postcuring to the final conversion was detd. by following the decay of the double bonds during and after irradn. with single or multiple short UV flashes with a duration of 50-200 ms. UV curing of a powder coating, a flexog. ink, and silicone acrylates was discussed.

IT 115055-18-0, Esacure KIP 150

(catalyst in FTIR-ATR study of kinetics of ultrafast UV photopolymn. of acrylates)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

- CC 35-3 (Chemistry of Synthetic High Polymers)
 - Section cross-reference(s): 37, 42
- ST acrylate **photopolymn** kinetics ultrafast; UV laser **photopolymn** kinetics acrylate
- IT Polysiloxanes, processes

(acrylate siloxanes; UV curing of)

IT IR reflectance spectroscopy

IR reflectance spectroscopy
 (attenuated total, Fourier-transform; in study of kinetics of

ultrafast UV photopolymn. of acrylates) IT Inks (flexog.; **UV curing** of) Polymerization kinetics IT (photopolymn.; FTIR-ATR study of kinetics of ultrafast UV **photopolymn**. of acrylates) Polymerization catalysts IT (photopolymn.; in FTIR-ATR study of kinetics of ultrafast UV photopolymn. of acrylates) IT Coating materials (powder; UV curing of) 4986-89-4, Pentaerythritol tetraacrylate IT 141-32-2 15625-89-5, Trimethylolpropane triacrylate 42978-66-5, Tripropylene glycol diacrylate (FTIR-ATR study of kinetics of ultrafast UV photopolymn 24650-42-8, Irgacure 651 71868-10-5, Irgacure 907 IT 7473-98-5 115055-18-0, Esacure KIP 150 119313-12-1, Irqacure 369 149260-52-6, Esacure KIP 100F 162881-26-7, Irgacure 819 189146-15-4, Lucirin TPO (catalyst in FTIR-ATR study of kinetics of ultrafast UV photopolymn. of acrylates) ANSWER 15 OF 19 HCA COPYRIGHT 2003 ACS 129:162219 Esacure KIP 150, a non migrating, non benzaldehyde releasing photoinitiator. Visconti, M.; Cattaneo, M.; Li Bassi, G. (Lamberti S.p.A., Albizzate, 21041, Italy). RadTech'98 North America UV/EB Conference Proceedings, Chicago, Apr. 19-22, 1998, 28-30. RadTech International North America: Northbrook, Ill. (English) 1998. CODEN: 66IXAN. Esacure KIP 150, an oligomeric polyfunctional .alpha.-hydroxyketone AB photoinitiator, was not released by a cured over print varnish based on an epoxy urethane acrylate when subjected to migration tests according to EEC guide-lines. Moreover, in expts. aimed to evaluate the release of volatile compds. during the curing process it did not release any volatile arom. aldehydic derivs., that are responsible for the unpleasant smell generated in the curing process. ΙT 115055-18-0, Esacure KIP 150 (photoinitiator; migration and release of volatile org. compd. photodecompn. products in photocuring of epoxy urethane acrylate over print varnish by non-benzaldehyde releasing) RN115055-18-0 HCA 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, CN

CM 1

CRN 101649-40-5 CMF C13 H16 O2

homopolymer (9CI) (CA INDEX NAME)

CC 37-6 (Plastics Manufacture and Processing)

IT Polyurethanes, uses

Polyurethanes, uses

(epoxy, acrylates; migration and release of volatile org. compd. photodecompn. products in **photocuring** of epoxy urethane acrylate over print varnish by non-benzaldehyde releasing)

IT Coating materials

(migration and release of volatile org. compd. photodecompn.
 products in photocuring of epoxy urethane acrylate over
 print varnish by non-benzaldehyde releasing Epicure KIP 150
 photoinitiator)

IT Crosslinking

(photochem.; migration and release of volatile org. compd. photodecompn. products in **photocuring** of epoxy urethane acrylate over print varnish by non-benzaldehyde releasing Epicure KIP 150 photoinitiator)

IT Epoxy resins, uses

Epoxy resins, uses

(polyurethane-, acrylates; migration and release of volatile org. compd. photodecompn. products in **photocuring** of epoxy urethane acrylate over print varnish by non-benzaldehyde releasing)

IT 115055-18-0, Esacure KIP 150

(photoinitiator; migration and release of volatile org. compd. photodecompn. products in **photocuring** of epoxy urethane acrylate over print varnish by non-benzaldehyde releasing)

L44 ANSWER 16 OF 19 HCA COPYRIGHT 2003 ACS

128:36029 Coating composition comprising acrylate-containing compound which is sprayable, curable by UV light, and substantially volatile organic solvent-free and method of using same. Sokol, Andrew A. (UV Coatings Limited, USA; Sokol, Andrew A.). PCT Int. Appl. WO 9745458 A1 19971204, 15 pp. DESIGNATED STATES: W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK,

TJ, TT, UA, US, UZ, VN; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US15464 19960926. PRIORITY: US 1995-553679 19950926.

A sprayable coating compn. is formulated using one or more acrylates AB and one or more photoinitiators which act to polymerize the compn. when exposed to UV light. Because of the use of low mol. wt. monomers or oligomers, the compn. is essentially free of volatile org. solvents and therefore evaporative emissions in curing are substantially eliminated. The compn. further includes a pigment or dye and optionally a nonreactive diluent to enable a wider range of viscosities.

IT 115055-18-0, 2-Hydroxy-2-methyl-1-[4-

(methylvinyl)phenyl]propanone homopolymer

(oligomeric, photoinitiator; sprayable substantially volatile org. solvent-free UV-curable coating compns.

comprising acrylate-contg. compd. and photoinitiator)

RN

115055-18-0 HCA 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, CNhomopolymer (9CI) (CA INDEX NAME)

CM

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F002-46

C08F002-50; C08F004-00; C08F004-40

42-7 (Coatings, Inks, and Related Products) CC

ST finishing compn acrylate contg; UV light

cure coating compn photoinitiator; volatile org solvent free coating compn; safety volatile free coating compn

Coating materials IT

(UV-curable, sprayable; sprayable substantially volatile org. solvent-free UVcurable coating compns. comprising acrylate-contg. compd. and photoinitiator)

ITEpoxy resins, uses

Polyesters, uses

Polyurethanes, uses

(acrylates; sprayable substantially volatile org. solvent-free

UV-curable coating compns. comprising acrylate-contg. compd. and photoinitiator) IT Polymerization catalysts Polymerization catalysts (cationic, photochem.; sprayable substantially volatile org. solvent-free UV-curable coating compns. comprising acrylate-contg. compd. and photoinitiator) IT Polymerization catalysts Polymerization catalysts (photochem., radical; sprayable substantially volatile org. solvent-free UV-curable coating compns. comprising acrylate-contg. compd. and photoinitiator) IT Coating materials (solventless, uv-curable, sprayable; sprayable substantially volatile org. solvent-free UVcurable coating compns. comprising acrylate-contg. compd. and photoinitiator) Volatile organic compounds IT (sprayable substantially volatile org. solvent-free UVcurable coating compns. comprising acrylate-contg. compd. and photoinitiator) 115055-18-0, 2-Hydroxy-2-methyl-1-[4-IT (methylvinyl) phenyl] propanone homopolymer (oligomeric, photoinitiator; sprayable substantially volatile org. solvent-free UV-curable coating compns. comprising acrylate-contg. compd. and photoinitiator) 492-22-8D, Thioxanthone, derivs. IT 119-61-9D, Benzophenone, derivs. 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 7473-98-5, 1-Phenyl-2-hydroxy-2-methyl-1-propanone (photoinitiator; sprayable substantially volatile org. solvent-free UV-curable coating compns. comprising acrylate-contg. compd. and photoinitiator) IT 79-10-7D, Acrylic acid, esters, polymers (sprayable substantially volatile org. solvent-free UVcurable coating compns. comprising acrylate-contg. compd. and photoinitiator) ANSWER 17 OF 19 HCA COPYRIGHT 2003 ACS L44 115:51899 Selected applications of oligomeric hydroxy acetophenone photoinitiator. Di Battista, Piero; Li Bassi, Giuseppe; Cattaneo, Massimo (Fratelli Lamberti S.p.A., Albizzate Varese, 21041, Italy). RadTech '90 North Am., Conf. Proc., Volume 1, 12-17. RadTech Int. North Am.: Northbrook, Ill. (English) 1990. CODEN: 57CAAM. Oligomeric 4-(.alpha.-hydroxyisobutyryl)-.alpha.-methylstyrene, AΒ already proposed to coating formulators because of its efficiency, good compatibility, low volatility, low odor, and nonyellowing

IT 115055-18-0

methyldiethanolamine.

(oligomeric, photoinitiators, for UV-curable

characteristics, was also an effective photoinitiator in systems contg. groups sensitive to H extn., i.e., acrylated polyurethanes. A synergistic effect was obtained with the addn. of an amine, e.g.,

coating materials)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

CC 42-5 (Coatings, Inks, and Related Products)

ST photoinitiator UV curable coating;

hydroxyacetophenone.oligomer photoinitiator; acrylate polyurethane photoinitiator

IT Coating materials

(UV-curable, photoinitiators for,

(hydroxyisobutyryl) methylstyrene oligomers as)

IT Crosslinking catalysts

(photochem., (hydroxyisobutyryl) methylstyrene oligomers, for UV-curable coatings)

IT 105-59-9, Methyldiethanolamine.

(UV curing of coating materials with

synergistic mixts. of (hydroxyisobutyryl) methylstyrene oligomers and)

IT 115055-18-0

(oligomeric, photoinitiators, for UV-curable coating materials)

L44 ANSWER 18 OF 19 HCA COPYRIGHT 2003 ACS

110:156134 Advance in low-odor coatings: a new class of polymeric nonyellowing photoinitiators. Li Bassi, Giuseppi; Cadona, Luciano; Broggi, Fabrizio (Fratelli Lamberti S.p.A., Varese, Italy). Polymers Paint Colour Journal (Suppl.), 114, 117-8, 122 (English) 1988. CODEN: PPCJA3. ISSN: 0370-1158.

Oligomeric and polymeric .alpha.-hydroxy-[4-(1-methylvinyl)]isobutyrophenones were highly reactive photoinitiators particularly suitable for UV-curable nonyellowing clear coatings. The low degree of volatility of the compds. or of their photolysis fragments allowed low odor coatings and very reactive water-based photocurable emulsions to be obtained.

IT 115055-18-0 (catalysts, for UV-curable acrylic coatings, with low odor and without discoloration) 115055-18-0 HCA 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, RN CN homopolymer (9CI) (CA INDEX NAME) CM CRN 101649-40-5 CMF C13 H16 O2 OH Me CH₂ CC42-3 (Coatings, Inks, and Related Products) ST hydroxymethylvinylisobutyrophenone polymer catalyst crosslinking photochem; **UV** curable coating hydroxymethylvinylisobutyrophenone catalyst IT Coating materials (UV-curable, acrylic resins, low-odor nonyellowing crosslinking catalysts for, isobutyrophenone deriv. oligomers and polymers as) IT Crosslinking catalysts (photochem., isobutyrophenone deriv. oligomers and polymers, low-odor and nonyellowing, for UV-curable acrylic coatings) 611-70-1D, Isobutyrophenone, derivs., oligomers and polymers IT 115055-18-0 (catalysts, for UV-curable acrylic coatings, with low odor and without discoloration) IT 52408-42-1, Laromer LR 8765 109190-58-1, Laromer EA 81 120026-32-6, Photomer 5029 (coatings, low-odor nonyellowing photocrosslinking catalysts for, isobutyrophenone deriv. oligomers and polymers as) ANSWER 19 OF 19 HCA COPYRIGHT 2003 ACS 109:75243 Photoinitiators for waterborne UV-curable coatings. Li Bassi, Giuseppe; Broggi, Fabrizio (Fratelli Lamberti S.p.A., Albizzate, 21041, Italy). Polymers Paint Colour Journal, 178(4210), 197-8, 200-1, 214 (English) 1988. CODEN: PPCJA3. 0370-1158.

The advantages of an oligomeric hydroxyalkyl Ph ketone and

PhCOCH2SSO3Na for UV curing of water-thinnable,

AB

water-dispersion, and water-sol. coating systems contg. acrylic polymers were demonstrated.

IT 115055-18-0

(oligomeric, catalysts, for UV curing
of waterborne coating systems)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

CC 42-3 (Coatings, Inks, and Related Products)

ST UV crosslinking aq coating; waterborne acrylic coating UV curing; photoinitiator UV curing coating

IT Coating materials

(UV-curable, water-thinned, acrylic polymers, photoinitiators for)

IT Crosslinking catalysts

(photochem., benzoyl group-contg. compds., for **uv-curable** waterborne coatings)

IT 6039-85-6

(catalysts, for UV curing of waterborne coating systems)

IT 115055-18-0

(oligomeric, catalysts, for UV curing

of waterborne coating systems)

IT 115742-75-1 115742-84-2 115743-06-1 115743-07-2 115743-08-3 (waterborne coating compns. contg., **UV curing** of, photoinitiators for)

=> d 145 1-16 cbib abs hitstr hitind

L45 ANSWER 1 OF 16 HCA COPYRIGHT 2003 ACS

137:354717 Radical initiator composition for use in a novel color care and stain treatment. Batchelor, Stephen Norman; Chapple, Andrew Paul; Fairclough, Lynette; Williams, Jacqueline (Unilever PLC, UK;

Unilever NV; Hindustan Lever Limited). PCT Int. Appl. WO 2002088292 Al 20021107, 38 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-EP3846 20020408. PRIORITY: GB 2001-10414 20010427. A surfactant compn. comprises a radical initiator, which is AΒ preferably a photo initiator and preferably selected from H abstraction photoinitiators, bond cleavage radical photoinitiators The compn. further comprises .gtoreq.1 detergency or their mixts. builder, and is characterized in that the radical initiator is adsorbed onto at least a portion of the builder. A wash powder contg. zeolite builder and 0.2% Lucirin TPO-L was used to remove stains from cotton (soya-based tomato stains), showing CIElab .delta.E value 5.0; vs. 24 for a detergent without catalyst. 115055-18-0, Esacure KIP-150 IT(radical initiator compn. for color care and stain removal on fabrics) RN115055-18-0 HCA 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, CNhomopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

10/086,243 Tarazano ANSWER 2 OF 16 HCA COPYRIGHT 2003 ACS 137:338398 Solid mixtures of .alpha.-hydroxycarbonyl derivatives of .alpha.-methylstyrene oligomers and their uses. Visconti, Marco; Norcini, Gabriele; Li Bassi, Giuseppe (Lamberti S.p.A., Italy). Int. Appl. WO 2002085832 A2 20021031, 8 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). APPLICATION: WO 2002-EP3674 20020403. PRIORITY: IT ·2001-VA11 20010424. AΒ Solid mixts. of .alpha.-hydroxycarbonyl derivs. of .alpha.-methylstyrene oligomers contg. .gtoreq.90% of dimer isomers (dimer isomer ratio 2.5-7) are prepd. and used as photoinitiators in light-induced radical photopolymn. of acrylic systems. IT 115055-18-0P (oligomers; solid mixts. of .alpha.-hydroxycarbonyl derivs. of .alpha.-methylstyrene oligomers for photoinitiators)

RN115055-18-0 HCA

CN1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM1

CRN 101649-40-5 CMF C13 H16 O2

ICM IC C07C049-83

C07C045-81; G03F007-031; C08F002-50

CC35-3 (Chemistry of Synthetic High Polymers) Section cross-reference(s): 67

ST acrylic photopolymn catalyst hydroxycarbonyl methylstyrene dimer; oligomer hydroxycarbonyl methylstyrene dimer acrylic photopolymn catalyst

IT 115055-18-0P

> (oligomers; solid mixts. of .alpha.-hydroxycarbonyl derivs. of .alpha.-methylstyrene oligomers for photoinitiators)

L45 ANSWER 3 OF 16 HCA COPYRIGHT 2003 ACS

136:371484 Bleaching composition comprising radical initiators for dyed fabrics. Batchelor, Stephen Norman; Fairclough, Lynnette; Williams, Jacqueline (Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited). PCT Int. Appl. WO 2002036723 A1 20020510, 26 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-EP12579 20011029. PRIORITY: GB 2000-26831 20001102.

AB The invention relates to bleaching compns. comprising radical initiators. More particularly the invention relates to laundry treatment compns. for the spot treatment of soiled articles and to a process using the said compns. The invention provides a fabric treatment compn. which comprises: (a) a radical initiator, and (b) a solvent which does not swell the amorphous regions of cotton. It is believed that the use of a solvent which is non-swelling prevents the passage of the initiator into the regions of the fibers where the dye resides while allowing the initiator to come into contact with the stain, which is essentially superficial. Preferred solvents are those with logP values greater than 1, most preferably greater than 2. The present invention further provides a method for the treatment of fabrics which comprises applying to the fabric a compn. according to the invention.

IT **115055-18-0**, KIP 150

(photoinitiators; bleaching compn. comprising radical initiators for dyed fabrics)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C11D003-00

ICS C11D003-20; C11D003-18; C11D003-43

CC 46-5 (Surface Active Agents and Detergents)

IT Polymerization catalysts

(photopolymn., radical; bleaching compn. comprising radical initiators for dyed fabrics)

IT 84434-11-7, Lucirin TPO-L 115055-18-0, KIP 150

149260-52-6, Esacure KIP 100F 211431-21-9, Esacure KTO 46 (photoinitiators; bleaching compn. comprising radical initiators for dyed fabrics)

L45 ANSWER 4 OF 16 HCA COPYRIGHT 2003 ACS

- 136:326622 Adhesive compositions and manufacture of flexible printed circuit boards therewith. Tanaka, Shigehiro; Endo, Kazuo; Takase, Masanori; Goto, Sakiko (Dainippon Ink and Chemicals, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2002121499 A2 20020423, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-317796 20001018.
- The compns. used to bond a conductive metal foil with a plastic film contain epoxy acrylates and photoinitiators. The circuit boards are manufd. by laminating a conductive metal foil with a plastic film using the compns., forming a resist pattern over the metal foil, subjecting to etching, and curing by radiation irradn. A compn. contained LX 660 23.3, KW 75 1.67, UE 8410 4.58, KIP-150 0.305 and EtOAc 29.6 part, showing good transparency, adhesion and no blocking.

IT **115055-18-0**, KIP 150

(photoinitiators; adhesive compn. and manuf. of flexible printed circuit boards therewith)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C09J004-06

ICS H05K003-06

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 76

IT Adhesives

(radiation-curable; adhesive compn. and

manuf. of flexible printed circuit boards therewith)

IT 115055-18-0; KIP 150

(photoinitiators; adhesive compn. and manuf. of flexible printed circuit boards therewith)

L45 ANSWER 5 OF 16 HCA COPYRIGHT 2003 ACS

136:310860 Method for producing crosslinked acrylate adhesives by use of alpha.-hydroxy ketone as photoinitiators in hot-melt process. Cartellieri, Ulf; Husemann, Marc; Ring, Christian; Zoellner, Stephan (Tesa Ag, Germany). PCT Int. Appl. WO 2002028963 A2 20020411, 27 pp. DESIGNATED STATES: W: JP, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (German). CODEN: PIXXD2. APPLICATION: WO 2001-EP11503 20011005. PRIORITY: DE 2000-10049669 20001006.

AB Polyacrylate adhesive compds. were produced by adding alpha.-hydroxy ketone as UV-crosslinking catalysts to a polyacrylate resin and curing the mixt. by hot-melt process and UV radiation. The polyfunctional UV-crosslinking catalyst which is present as an oligomer (Esacure KIP 150) is added to the acrylic polymer to be crosslinked prior to the hot-melt process and UV crosslinking is carried out after treatment in the hot-melt process. The photoinitiator .alpha.-hydroxy ketones are less volatile and less prone to cause premature gelling of hot-melt adhesives than previous-art systems.

IT **115055-18-0**, Esacure KIP 150

(UV-crosslinking catalyst; manuf.

of crosslinked polyacrylate hot-melt adhesives by **UV** curing)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08L033-00 CC 38-3 (Plastics Fabrication and Uses) polyacrylate adhesive manuf UV crosslinking; SThydroxy ketone UV curing catalyst polyacrylate manuf; hot melt polyacrylate adhesive manuf UV curing Adhesives IT (hot-melt, UV-curable; manuf. of crosslinked polyacrylate hot-melt adhesives by **UV curing**) IT Crosslinking Crosslinking catalysts (photochem.; manuf. of crosslinked polyacrylate hot-melt adhesives by **UV curing**) IT Adhesives (photocurable, hot-melt; manuf. of crosslinked polyacrylate hot-melt adhesives by **UV curing**) ITKetones, uses (.alpha.-hydroxy, UV-crosslinking catalyst; manuf. of crosslinked polyacrylate hot-melt adhesives by **UV curing**) 947-19-3, Irgacure 184 5495-84-1, Speedcure ITX . IT 24650-42-8, Irgacure 651 115055-18-0, Esacure KIP 150 119313-12-1, 162881-26-7, Irgacure 819 410074-57-6, Speedcure Irgacure 369 BMDS (UV-crosslinking catalyst; manuf. of crosslinked polyacrylate hot-melt adhesives by **uv** curing) IT 346705-87-1P 383185-71-5P 409126-20-1P (manuf. of crosslinked polyacrylate hot-melt adhesives by UV curing) IT' 410074-58-7, Genomer 4212 9017-27-0, Piccotex 75 410074-59-8, DT 410074-68-9, Genomer 5248 410074-70-3, Genomer 5275 410074-71-4, Genomer 5292 (manuf. of crosslinked polyacrylate hot-melt adhesives by UV curing) ANSWER 6 OF 16 HCA COPYRIGHT 2003 ACS 136:126543 UV-curable photoresist compositions with excellent coating properties, acid resistance, and alkali developability. Kato, Mitsuyoshi; Usuki, Naomi; Fujita, Akira (The Inctec Inc., Japan). Jpn. Kokai Tokkyo Koho JP 2002020411 A2 20020123, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2000-206072 20000707. AB The compns., useful for etching masks in photolithog., contain (A) (meth)acrylates having .gtoreq.1 carboxyl end groups, (B) polyfunctional (meth) acrylates (other than A) and/or monofunctional (meth)acrylates, and (C) photopolymn. initiators R1(CMeQCH2)nR2[Q = p-C6H4C:OCMe2(OH); R1,2 = H, (un)substitutedalkyl; n = 2-50].115055-18-0, Esacure KIP 150 IT (photopolymn. initiator; UV-curable

photoresist compns. with good coating properties for etching

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masks in photolithog.)
RN
     115055-18-0 HCA
     1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-,
CN
     homopolymer (9CI) (CA INDEX NAME)
     CM
     CRN
          101649-40-5
     CMF
          C13 H16 O2
                OH
                Me
   CH<sub>2</sub>
IC
     ICM
          C08F002-50
     ICS
         C08F002-44; C08F220-26; C08F290-04; C08L033-14; G03F007-027;
          G03F007-028
CC
     74-5 (Radiation Chemistry, Photochemistry, and Photographic and
     Other Reprographic Processes)
ST
     UV curing photoresist coating etching mask;
     alkali development acryloyloxypropyl hydrophthalate lauryl acrylate;
     photopolymn initiator hydroxymethyl
     methylvinylphenylpropanone oligomer photolithog
TT
     Etching masks
        (UV-curable photoresist compns. with good
        coating properties for etching masks in photolithog.)
IT
     Photoresists
        (UV; UV-curable photoresist compns.
        with good coating properties for etching masks in photolithog.)
IT
     Polymerization catalysts
        (photopolymn.; UV-curable
        photoresist compns. with good coating properties for etching
        masks in photolithog.)
     103-11-7, 2-Ethylhexyl acrylate 2156-97-0, Lauryl acrylate
IT
     3076-04-8, Tridecyl acrylate 4986-89-4, Pentaerythritol
     tetraacrylate
                     12542-30-2, Dicyclopentadienyl acrylate
     64401-02-1, Aronix M 210
                                97387-29-6, .omega.-
     Carboxypolycaprolactone monoacrylate
                                             133793-62-1
                                                           371970-07-9
        (UV-curable photoresist compns. with good
        coating properties for etching masks in photolithog.)
IT
     7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one
                                                           24650-42-8,
     2,2-Dimethoxy-1,2-diphenylethanone 71868-10-5,
     2-Methyl-1-[4-(methylthio)phenyl]-2-morpholino-1-propanone
     115055-18-0, Esacure KIP 150
        (photopolymn. initiator; UV-curable
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photoresist compns. with good coating properties for etching masks in photolithog.) IT 69458-64-6, Megafac F 173 (surface modifier; UV-curable photoresist compns. with good coating properties for etching masks in photolithog.) L45 ANSWER 7 OF 16 HCA COPYRIGHT 2003 ACS 135:93537 UV-curable sealing compositions and manufacture of plastic lenses by casting therewith. Sugitani, Masao; Hagiri, Yoshihiro; Iwanami, Saneo; Watanabe, Toshio (Kyoritsu Chemical Industry Co., Ltd., Japan; Seiko Epson Corp.). Jpn. Kokai Tokkyo Koho JP 2001179758 A2 20010703, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-370161 19991227. The lenses are manufd. by feeding liq. thermosetting compns. contg. AB .qtoreq.1 mercapto compd. of HSCH2CH2SCH2CH(CH2SH)SCH2CH2SH (I) and/or C(CH2OCOCH2CH2SH)4 and .gtoreq.1 polyisocyanate through a hole into a cavity of a pair of molds, sealing the hole with UV-curable polymer compns. contg. polyisoprene acrylate oligomers with Mw 10,000-50,000, and curing the UV-curable polymer Thus, a compn. (A) contg. I, m-xylylene diisocyanate, and 2-(5-methyl-2-hydroxyphenyl)benzotriazole was fed into a pair of molds sealed with an adhesive tape through a hole on the tape, where a UV-curable compn. contg. a catalyst (Esacure KIP 150) and an oligomer prepd. from TL 20 (OH-contg. polyisoprene oligomer) and vinyl isocyanate was applied on the hole and cured by UV irradn. for sealing. The compn. (A) was heated and molded to give a lens showing no optical strain. IT115055-18-0, Esacure KIP 150 (polymn. catalysts for UVcurable compns.; manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.) RN115055-18-0 HCA CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM

CRN

1

101649-40-5

CMF C13 H16 O2

38-2 (Plastics Fabrication and Uses) Section cross-reference(s): 73

lens polythiourethane casting tape; polyisoprene acrylate oligomer ST UV curable sealant; mercaptomethyl octanedithiol xylylene isocyanate lens

IT Lenses Sealing compositions

UV stabilizers

(manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

IT Polymerization catalysts

(photopolymn.; manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

ITCasting of polymeric materials

(tape; manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

ITPolyurethanes, uses

(thio-; manuf. of plastic lenses by casting of polythiourethanes using **UV-curable** sealing compns.)

IT

(UV absorber; manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

131538-01-7P, 4-(Mercaptomethyl)-3,6-dithia-1,8-octanedithiol-m-IT xylylene diisocyanate copolymer

(manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

3555-94-0DP, Vinyl isocyanate, reaction products with hydroxy-contg. ITpolyisoprene, polymers 9003-31-0DP, Polyisoprene, hydroxy-contg., reaction products with vinyl isocyanate, polymers 348083-19-2DP, TL 20 (oligomer), reaction products with vinyl isocyanate, polymers (manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

IT 7575-23-7

(manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

IT 115055-18-0, Esacure KIP 150 (polymn. catalysts for UVcurable compns.; manuf. of plastic lenses by casting of polythiourethanes using UV-curable sealing compns.)

ANSWER 8 OF 16 HCA COPYRIGHT 2003 ACS L45

135:47716 Photocurable sealing compositions generating reduced amount of volatile gas for electronic devices, and sealing layer-formed devices. Arai, Yoshihide; Nemoto, Takashi (Three Bond Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001163931 A2 20010619, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-352739 19991213.

AΒ Title compns. comprise urethane (meth)acrylate · 10-80, (meth)acrylate ester monomers 20-90, photopolymn. initiators 0.3-10, and fillers 1-30%, and have shear stress yield point 5-100 Pa. The compns. have appropriate viscosity for automatic application and show good shape retention when applied on substrates. Thus, urethane prepolymer [Mw 50,000, prepd. from [HOCH2CH2(OCHMeCH2)nC6H4]2CMe2, HDI, and 2-hydroxyethyl acrylate], tetrahydrofurfuryl acrylate, phenoxy acrylate, KIP 150 (photopolymn. initiator), and Aerosil R 972 (dimethyldichlorosilane-treated silica) were photocured and stored at 80.degree. for 24 h to show wt. change -0.3%.

115055-18-0, KIP 150 IT

(photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices)

RN115055-18-0 HCA

1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, CN homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F290-06

> C08F002-50; C08F290-14; C09D004-00; C09J004-00; C09J007-02; ICS C09K003-10

CC 42-11 (Coatings, Inks, and Related Products) Section cross-reference(s): 76

ST photocurable hydrofurfuryl acrylate polyurethane sealing electronic; shape retention acrylate polyurethane sealing electronic; silica filler acrylate polyurethane sealing electronic IT Electric apparatus Fillers (photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) IT Sealing compositions (photocurable; photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) IT Polymerization catalysts (photopolymn.; photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) IT Polyurethanes, uses (polyester-, acrylic; photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) IT Polyurethanes, uses (polyoxyalkylene-, acrylic; photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) ΙT 115055-18-0, KIP 150 (photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) 344920-36-1P IT 344920-33-8P 344920-34-9P 344920-35-0P 344928-11-6P (photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) IT 7631-86-9, Aerosil R-200, uses 60842-32-2, Aerosil R 972 145539-08-8, TS 720 (photocurable low out-gas urethane (meth)acrylate compns. for sealing electronic devices) L45 ANSWER 9 OF 16 HCA COPYRIGHT 2003 ACS 135:6569 Use of a cast resin and a thermoset edge seal for producing a sandwich system consisting of a picture screen and a glass pane.

- Schwamb, Michael; Poehlmann, Thomas (Chemetall Gmbh, Germany). PCT Int. Appl. WO 2001038087 A1 20010531, 38 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, (German). CODEN: PIXXD2. APPLICATION: WO 2000-EP11104 TG, TR. PRIORITY: DE 1999-19956548 19991124; DE 2000-10048991 20001110. 20000927.
- AB The invention relates to the use of a transparent cast resin that consists of reactive acrylate and methacrylate monomers, acrylate and methacrylate oligomers, coupling agents, and initiators. The invention further relates to the use of an edge seal for producing a sandwich system that consists of a picture screen, a cast-resin layer, an edge seal that laterally surrounds the cast-resin layer,

and a glass pane. The product can be used as the front part of a shatter-resistant TV screen. In an example, a mixt. of Vistanex LM-H and Bu 065 was used as an edge-sealing resin. For the casting resin, a copolymer of 2-ethylhexyl acrylate, 2-ethylhexyl methacrylate, acrylic acid, and Jagotex AP 273 was produced using benzyl di-Me ketal **photocatalyst** and heating.

IT 115055-18-0, Esacure KIP 150

(photopolymn. catalyst; in prodn. of resins for TV screen-glass pane laminate)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM B32B017-10

ICS C09J004-00

CC 38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 39, 57

IT Polymerization catalysts

(photopolymn.; in prodn. of resins for TV screen-glass
pane laminate)

IT 947-19-3, Irgacure 184 24650-42-8, Lucirin BDK **115055-18-0** , Esacure KIP 150

(photopolymn. catalyst; in prodn. of resins for TV screen-glass pane laminate)

L45 ANSWER 10 OF 16 HCA COPYRIGHT 2003 ACS

134:296679 Ultraviolet curable resin compositions having enhanced shadow cure properties. Gregory, Scott (Rheox, Inc., USA). Eur. Pat. Appl. EP 1092740 A1 20010418, 15 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2000-308981 20001012. PRIORITY: US 1999-415079 19991012.

AB The sealing compn. including an additive of .gtoreq.1 org. peroxide thermal initiators to cationic photoinitiators, that are sensitized with .alpha.-hydroxyketones, which compn. provides a

self-propagating thermal curing reaction first activated by a short duration of surface UV radiation. The thermal reaction is non-directional, thus eliminating the line of sight limitation of current radiation curing processes. Complete curing can be achieved of the compn. in a very short time; often after only a few minutes or less. The activation period can be provided by only a few seconds of UV light using a wide variety of com. UV light sources. Thus, a compn. was made from a mixt. of ERL 4221 57.8, Tone 0310 42.2, and CD 1012 1.0 part.

IT 115055-18-0, Esacure KIP 150

(UV curable resin compns. having enhanced shadow cure properties)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC .ICM C08G059-24

ICS G03F007-038; C08L035-08; C08L063-00

CC 37-6 (Plastics Manufacture and Processing)

ST UV light curable epoxy sealing compn;
peroxide hydroxyketone photoinitiator epoxy resin; free radical
generator curing epoxy; hexafluoroantimonate photocuring
epoxy

IT Polymerization catalysts

Potting compositions

Sealing compositions

(UV curable resin compns. having enhanced shadow cure properties)

IT 119-61-9, Benzophenone, uses 614-45-9, tert-Butyl perbenzoate 947-19-3, Irgacure 184 4511-39-1, tert-Amyl perbenzoate 6175-45-7, 2,2-Diethoxyacetophenone 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 10373-78-1, Camphorquinone 21245-02-3, 2-Ethylhexyl-p-dimethylaminobenzoate 24650-42-8, 2,2-Dimethoxy-2-phenyl acetophenone 71868-10-5, Irgacure I 907 75081-21-9, Isopropyl thioxanthone 115055-18-0, Esacure KIP 150 119313-12-1 139301-16-9, CD 1012 162881-26-7,

Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide 220183-80-2 (UV curable resin compns. having enhanced shadow cure properties)

IT 124375-07-1

(UV curable resin compns. having enhanced shadow cure properties)

IT 94-36-0, Benzoyl peroxide, uses

(peroxides, Lucidol 98; UV curable resin

compns. having enhanced shadow cure properties)

IT 3006-82-4, Lupersol PDO 3006-86-8, Lupersol 331-80B 15667-10-4, Lupersol 531-80B 34443-12-4, Lupersol TBEC 70833-40-8, Lupersol TAEC

(peroxides; **UV** curable resin compns. having enhanced shadow cure properties)

L45 ANSWER 11 OF 16 HCA COPYRIGHT 2003 ACS

133:253995 Ultraviolet-curable coating compositions for cationic electrodeposition onto metallic materials and electrically conductive plastics. Fukuda, Masao; Shimizu, Yoshiji (Shimizu Co., Ltd., Japan). Eur. Pat. Appl. EP 1036829 A1 20000920, 11 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 1999-200852 19990318.

A UV-curable coating compn. comprises 100 parts AB acrylic resin contg. 10-70% polyfunctional acrylate having .qtoreq.3 acryloyl groups and 30-90% resin of mol. wt. 2,000-30,000 having a cationic electrodeposition property, and 0.1-10 parts of .gtoreq.2 species of photopolymn. initiators which absorb UV radiation at 300-400 nm. Thus, mixing a soln. of copolymer of dimethylaminoethyl methacrylate, 2-hydroxyethyl methacrylate, 2-ethylhexyl acrylate, Bu methacrylate, Me methacrylate, and styrene with Urethane acrylate UA-101T, and a combination of photopolymn. initiators 2-hydroxy-2-methyl-1-phenylpropan-1one and bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide gave a coating compn. Test pieces of Ni-plates ABS resin were coated with the above electrodeposition coating compn., dried at 80.degree. for 10 min, and exposed to UV light to give a film having cross hatch tape adhesion 100/100, Mitsubishi pencil hardness 3H, and good appearance.

IT 115055-18-0

(oligomer; **UV-curable** electrodeposition coating on Ni-plated ABS resin)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C09D005-44

CC 42-10 (Coatings, Inks, and Related Products)

ST UV curable acrylic resin electrodeposition coating; plated plastic substrate electrodeposition coating; metal substrate electrodeposition coating

IT Electrodeposits

(UV-curable; UV-curable

coating compns. for cationic electrodeposition onto metallic materials and elec. conductive plastics)

IT Polyurethanes, uses

(acrylates; **UV-curable** electrodeposition coating on Ni-plated ABS resin)

IT 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 954-16-5, 2,4,6-Trimethylbenzophenone 7473-98-5, 2-Hydroxy-2-methyl-1-phenylpropan-1-one 41295-28-7 162881-26-7, Bis(2,4,6-trimethylbenzoyl)phenylphosphine oxide

(UV-curable electrodeposition coating on :

Ni-plated ABS resin)

IT 294855-54-2P 294855-55-3P 295326-76-0P (**UV-curable** electrodeposition coating on

Ni-plated ABS resin)

IT 9003-56-9, ABS resin

(nickel-plated; UV-curable electrodeposition
coating on Ni-plated ABS resin)

IT 115055-18-0

IT

(oligomer; UV-curable electrodeposition

coating on Ni-plated ABS resin)

7440-02-0, Nickel, miscellaneous (plating; **UV-curable** electrodeposition coating on Ni-plated ABS resin)

L45 ANSWER 12 OF 16 HCA COPYRIGHT 2003 ACS

132:173480 Photocurable resin composition with low chlorine content for optical disk fabrication. Takahashi, Toshihiko; Takehana, Yuichi; Takase, Hideaki; Ukachi, Takashi (DSM N.V., Neth.; JSR Corporation; Japan Fine Coatings Co., Ltd.). PCT Int. Appl. WO 2000009620 A1 20000224, 46 pp. DESIGNATED STATES: W: CN, KR, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1999-NL511 19990811. PRIORITY: JP 1998-230469 19980817.

- AB A photocurable resin compn. comprises (A) a urethane (meth)acrylate prepd. by the reaction of a polyol compd., a polyisocyanate compd., and a hydroxyl-contg. (meth)acrylate compd., (B) a (meth)acrylate compd. having at least one (meth)acryloyl group in the mol., and (C) a photoinitiator, with a chlorine content of no more than 0.001 wt%. The invention also relates to a process for prepg. the photocurable resin compn. and an optical disk fabricated using the photocurable resin compn. as an adhesive.
- IT 115055-18-0, Esacure KIP150

(photocurable resin compns. as adhesives for optical disk fabrication contg. urethane (meth) acrylates, (meth) acrylates and)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

- IC C09J004-06; G11B007-24; C08F290-14; C08F290-06; C08G018-67
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST photocurable compn low chlorine content adhesive optical disk
- IT Polyurethanes, uses

(acrylates; photocurable resin compns. as adhesives for optical disk fabrication contg. (meth) acrylates and)

IT Optical disks

(photocurable resin compns. with low chlorine contents as adhesives for fabrication of)

IT Optical recording materials

(photocurable resin compns. with low chlorine contents as adhesives for prepn. of)

IT Adhesives

(photocurable resin compns. with low chlorine contents for use in optical disk fabrication as)

IT 83104-79-4, 2-Hydroxyethyl acrylate-isophorone diisocyanate-polytetramethylene glycol copolymer 258513-33-6,

1,3-Bis(isocyanatomethyl)cyclohexane-2-hydroxyethyl acrylate-Placcel CD205 copolymer

(photocurable resin compns. as adhesives for optical disk fabrication contg. (meth)acrylates and)

IT 2156-97-0, Lauryl acrylate 2399-48-6, Tetrahydrofurfuryl acrylate 5117-12-4, Acryloylmorpholine 13048-33-4, 1,6-Hexanediol diacrylate 48145-04-6, Phenoxyethyl acrylate 81063-55-0 (photocurable resin compns. as adhesives for optical

disk fabrication contg. urethane (meth)acrylates and) 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 24650-42-8

IT 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1one 115055-18-0, Esacure KIP150

(photocurable resin compns. as adhesives for optical disk fabrication contg. urethane (meth) acrylates, (meth) acrylates and)

- ANSWER 13 OF 16 HCA COPYRIGHT 2003 ACS
- 128:155415 Water-absorbent fibers and manufacture thereof. Hayashi, Yasushi; Fuyuki, Tadataka; Higashi, Takashi; Nakahara, Yoshifumi; Tsurushima, Akiyasu (Sekisui Plastics Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10018125 A2 19980120 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-188397 19960627
- AB The title fibers showing no lumping or falling during manuf. or use comprise at least water-absorbent fiber components and softener components (5-50% in fiber) and have water absorption ratio 30-120 times own wt. An aq. soln. (monomer concn. 45%) acrylic acid partial sodium salt, polyethylene glycol diacrylate, poly(ethylene oxide) as stringiness-imparting agent, and Darocur was pushed through a nozzle (inner diam. 0.97 mm), and the stringy extrudate was irradiated with a high-pressure Hg lamp, collected on a conveyer belt, and dried at 110.degree. to obtain fibers of diam. around 150 .mu.m, water content 8%, and saline water absorption 42 times own
- IT 115055-18-0

(Esacure KIP 150; water-absorbent fibers and manuf. thereof)

RN115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM

CRN 101649-40-5 CMF C13 H16 O2

ICM D01F006-52

A61F013-46; A61F005-44; A61F013-15; D01D005-40; D01F006-16; D01F011-04; D04H001-42

CC 40-2 (Textiles and Fibers)

IT Polymerization catalysts

(photopolymn.; water-absorbent fibers and manuf. thereof)

IT 115055-18-0

(Esacure KIP 150; water-absorbent fibers and manuf. thereof)

ANSWER 14 OF 16 HCA COPYRIGHT 2003 ACS

128:141543 Radiation-curable acrylic polymer compositions for casting. Ukon, Masakatsu; Kato, Yoshiko; Takahashi, Toshihiko (Japan Synthetic Rubber Co., Ltd., Japan; Nippon Tokushu Coating K. K.). Jpn. Kokai Tokkyo Koho JP 10017635 A2 19980120 Heisei, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-177800 19960708.

The compns. contain (A) compds. contg. .gtoreq.1 (meth)acryloyl AB groups and (B) radiation polymn. initiators with groups shown as [CMe(p-C6H4COCR1R2OH)CH2]n (R1-R2 = C1-5 alkyl; n =no. of repeating units). The compns. have excellent transparency, dimensional stability, and weather resistance and are useful for optical materials such as lenses, optical disks, prisms, etc. 100 parts a compn. comprising Ripoxy VR 77 (bisphenol A diglycidyl ether polymer acrylate) 50, Aronix M 110 30, phenoxy diethylene glycol acrylate 10, and ACMO 10 parts was mixed with 5 parts Esacure KIP 150 [2-hydroxy-2-methyl-1-[4-(1-methylvinyl)phenyl]propane-1-one oligomer], applied on a glass plate, and exposed to UV to give a cured film showing light transmittance at 400, 500, and 600 nm 85, 99, and 100%, reps. and color difference (.DELTA.E) 5 after 7-day exposure to UV. A polyethylene terephthalate film coated with the compn. was kept at 60.degree. for 2 h, showing av. warpage 5 mm.

115055-18-0, Esacure KIP 150

(Esacure KIP 150; radiation-curable acrylic polymer compns. contg. photoinitiators for transparent cast moldings for optical materials)

RN 115055-18-0 HCA

IT

1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, CN homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F299-00

ICS C08F002-50; C08F004-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 73

radiation curable acrylic polymer cast molding; transparency radiation curable acrylic polymer casting; weather resistance radiation curable acrylic polymer; hydroxymethyl methylvinyl phenyl propane polymn initiator; optical material UV curable acrylic polymer

IT Polymerization catalysts

(photopolymn.; radiation-curable

acrylic **polymer** compns. contg. photoinitiators for transparent cast moldings for optical materials)

IT Casting of polymeric materials

Optical materials

Transparent materials

(radiation-curable acrylic polymer

compns. contg. photoinitiators for transparent cast moldings for optical materials)

IT 115055-18-0, Esacure KIP 150

(Esacure KIP 150; radiation-curable acrylic

polymer compns. contg. photoinitiators for transparent
cast moldings for optical materials)

IT 149260-52-6, Esacure KIP 100F

(radiation-curable acrylic polymer

compns. contg. photoinitiators for transparent cast moldings for optical materials)

IT 202400-99-5P

(radiation-curable acrylic polymer

compns. contg. photoinitiators for transparent cast moldings for optical materials)

L45 ANSWER 15 OF 16 HCA COPYRIGHT 2003 ACS

123:201337 Photocurable resin compositions for electric and

electronic device sealing materials. Hibino, Satoru (Three Bond Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 07033837 A2 19950203 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-199912 19930720.

The compns. contain oligomers comprising butadiene-based resins having polymerizable ethylenically unsatd. double bonds at their terminals and/or side chains and contg. .gtoreq.50% butadiene homopolymers contg. .gtoreq.50% 1,4-butadienes or 100 parts resins contg. 20-100% the butadiene-based resins and 0-80% resins comprising monomers contg. .gtoreq.1 polymerizable ethylenically unsatd. double bond and 1-5 parts photoinitiators. Thus, 100 parts Poly bd R-45ACR-LC (polybutadiene-based resin) and 2 parts 1-hydroxycyclohexylphenyl ketone were mixed to obtain a photocurable resin compn., which was applied on a magnetic hard disk drive, and cured by UV radiation, the resulted sealing material showed good reliability and low volatiles.

IT 115055-18-0

(photocurable resins compns. contg. ethylenic
polybutadienes, (meth)acrylic monomers, and photoinitiators for
elec. device packaging)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F290-04

ICS C08F002-48; C08F290-12

CC 38-3 (Plastics Fabrication and Uses) Section cross-reference(s): 37

photocurable resin butadiene sealing material; ethylenic polybutadiene acrylate sealant photocuring; photoinitiator polybutadiene methacrylate electronic sealant; elec sealing material photocurable resin

IT Sealing compositions

(UV-curable, photocurable resins compns. contg. ethylenic polybutadienes, (meth)acrylic monomers,

```
and photoinitiators for elec. device packaging)
IT
     Rubber, butadiene, uses
        (acrylate-terminated, 1,2-configuration, Poly bd-R 45ACR-LC;
        photocurable resins compns. contg. ethylenic
        polybutadienes, (meth)acrylic monomers, and photoinitiators for
        elec. device packaging)
IT
     Polymerization catalysts
        (photochem., photocurable resins compns. contg.
        ethylenic polybutadienes, (meth)acrylic monomers, and
        photoinitiators for elec. device packaging)
     119-61-9, Benzophenone, uses 947-19-3, 1-Hydroxycyclohexyl phenyl
IT
              7473-98-5
                          13840-40-9D, Phosphine oxide, acyl derivs.
     15206-55-0, Methylbenzoyl formate
                                         24650-42-8
                                                      71868-10-5
     110430-11-0 115055-18-0
                               119313-12-1
        (photocurable resins compns. contg. ethylenic
        polybutadienes, (meth)acrylic monomers, and photoinitiators for
        elec. device packaging)
IT
     101-43-9DP, Cyclohexyl methacrylate, reaction products with
     polybutadiene (meth)acrylates 109-16-0DP, Triethylene glycol
     dimethacrylate, reaction products with polybutadiene (meth)acrylates
     109-17-1DP, Tetraethylene glycol dimethacrylate, reaction products
                                          142-90-5DP, Lauryl
     with polybutadiene (meth)acrylates
     methacrylate, reaction products with polybutadiene (meth)acrylates
     868-77-9DP, 2-Hydroxyethyl methacrylate, reaction products with
     polybutadiene acrylates 923-26-2DP, 2-Hydroxypropyl methacrylate,
     reaction products with polybutadiene acrylates
                                                      2399-48-6DP,
     Tetrahydrofurfuryl acrylate, reaction products with polybutadiene
     (meth) acrylates
                       5888-33-5DP, Isobornyl acrylate, reaction products
                                   7534-94-3DP, Isobornyl methacrylate,
    with polybutadiene acrylates
     reaction products with polybutadiene (meth)acrylates
                                                            10595-06-9DP,
     2-Phenoxyethyl methacrylate, reaction products with polybutadiene
                       16969-10-1DP, 2-Hydroxy-3-phenoxypropyl acrylate,
     (meth)acrylates
     reaction products with polybutadiene (meth)acrylates
                                                            34759-34-7DP,
    reaction products with polybutadiene (meth)acrylates
                                                            42594-17-2DP,
     reaction products with polybutadiene (meth)acrylates
                                                            42978-66-5DP,
    Tripropylene glycol diacrylate, reaction products with polybutadiene
     (meth)acrylates
                      48145-04-6DP, 2-Phenoxyethyl acrylate, reaction
    products with polybutadiene (meth)acrylates
                                                   68169-12-0DP,
    Dicyclopentenyloxyethyl acrylate, reaction products with
    polybutadiene (meth)acrylates
                                    79637-74-4DP, reaction products with
    polybutadiene (meth)acrylates
                                     103831-37-4DP, Nonapropylene glycol
    dimethacrylate, reaction products with polybutadiene (meth)acrylates
        (photocurable resins compns. contg. ethylenic
       polybutadienes, (meth)acrylic monomers, and photoinitiators for
       elec. device packaging)
IT
    159446-74-9, BAC 45
        (polybutadiene diacrylate, 1,2-configuration;
       photocurable resins compns. contg. ethylenic
       polybutadienes, (meth)acrylic monomers, and photoinitiators for
       elec. device packaging)
IT
    9003-17-2
        (rubber, acrylate-terminated, 1,2-configuration, Poly bd-R
```

45ACR-LC; **photocurable** resins compns. contg. ethylenic polybutadienes, (meth)acrylic monomers, and photoinitiators for elec. device packaging)

L45 ANSWER 16 OF 16 HCA COPYRIGHT 2003 ACS

113:192642 Photopolymerizable liquid composition, viscoelastic product obtained from the composition, and process for producing the viscoelastic product. Nakasuga, Akira (Sekisui Chemical Co., Ltd., Japan). Eur. Pat. Appl. EP 373662 A2 19900620, 11 pp. DESIGNATED STATES: R: DE, FR, GB, IT. (English). CODEN: EPXXDW. APPLICATION: EP 1989-123188 19891214. PRIORITY: JP 1988-315998 19881214.

The title high-mol.-wt. viscoelastic products, useful in adhesive tapes, are prepd. by photochem. polymn. of a compn. comprising an alkyl (meth) acrylate and a photopolymn. initiator bearing .gtoreq.2 photocleavagable bonds/mol. A mixt. of 2-ethylhexyl acrylate 97, acrylic acid 3, and a polyfunctional initiator (prepd. by reaction of 5 parts Duracure 2959 and 2.76 parts isophorone diisocyanate) 1 part was impregnated in a nonwoven fabric, sandwiched between transparent polyester films, and irradiated with 10 mW/cm2 light for 4.5 min, giving a double-side pressure-sensitive adhesive tape with tack strength 1140 g/25 mm and holding power (to a steel plate with 1 kg load) 0.1 h.

IT 115055-18-0

(oligomeric, photoinitiators for acrylate monomers)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IC ICM C08F020-12

CS C08F002-50; C09J133-06; C09J007-02

CC 37-3 (Plastics Manufacture and Processing)

photopolymn; adhesive tape pressure sensitive

IT Adhesive tapes

(pressure-sensitive, double-side, photopolymd. acrylate

polymers for)

IT 115055-18-0

(oligomeric, photoinitiators for acrylate monomers)

4098-71-9DP, Isophorone diisocyanate, reaction products with
Darocure 2959 106797-53-9DP, reaction products with isophorone
diisocyanate

(prepn. of, as polyfunctional **photopolymn**. initiators for acrylate monomers)

=> d 146 1-2 ti

L46 ANSWER 1 OF 2 HCA COPYRIGHT 2003 ACS

Non-yellowing rapid drying nail polish top-coat compositions containing cellulose acetate butyrate and an aliphatic ester

L46 ANSWER 2 OF 2 HCA COPYRIGHT 2003 ACS

TI Reactivity and excited state processes in a polymeric photoinitiator

=> d 146 1 cbib abs hitstr hitrn

L46 ANSWER 1 OF 2 HCA COPYRIGHT 2003 ACS

129:153016 Non-yellowing rapid drying nail polish top-coat compositions containing cellulose acetate butyrate and an aliphatic ester. Sirdesai, Sunil J.; Schaeffer, George (OPI Products, Inc., USA). U.S. US 5785958 A 19980728, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1995-558638 19951113.

Rapid drying top coat used to provide a durable glossy look to AB manicured nails. The rapid-drying, durable coating compn. is comprised of a base resin of cellulose acetate butyrate and an aliph. ester monomer. Addnl. components include a film former, a crosslinking agent, an inhibitor to polymn. and a solvent. rapid drying nail polish top-coat compn. cures to a hard durable finish within a few minutes on exposure either to safe dosage of UV light or any heat source depending whether the formulation contains a photoinitiator or thermal initiator. This process of curing also aids in drying the inner layers of nail polish application by evapg. the solvents in these layers. The top coats are non-toxic and exhibit an unique property of non-yellowing. A nail polish contained Et acetate 40, Bu acetate 30, iso-Pr alc. 4.2, Et methacrylate 3.0, ethylene glycol dimethacrylate 0.3, Darocur 1173 0.3, Rohagum PM685 11, cellulose acetate butyrate 381-0.5 6.7, cellulose acetate butyrate 381-2.0 4.5%, and 4-methoxy phenol 5 ppm. IT 115055-18-0

(non-yellowing rapid drying nail polish top-coat compns. contg. cellulose acetate butyrate and aliph. ester)

RN 115055-18-0 HCA

CN 1-Propanone, 2-hydroxy-2-methyl-1-[4-(1-methylethenyl)phenyl]-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 101649-40-5 CMF C13 H16 O2

IT 115055-18-0

(non-yellowing rapid drying nail polish top-coat compns. contg. cellulose acetate butyrate and aliph. ester)